#### Penn's CECCR II

- Two major projects
  - SSB II, called Cancer Patient-Clinician Information Exchange (PCIE) (Hornik/Armstrong)
  - Smoking Cues in anti-tobacco public service announcements (Lerman/Cappella)
- Specialized Cores
  - Message Core (Cappella)
  - Developmental core (Hornik)
  - Training core (Schwartz/Cappella)
  - Translation core (Armstrong)

# Patient-Clinician Information Exchange: Determinants and Effects on Health Behaviors and Outcomes. SSB II

Pls: Hornik, Armstrong

Investigators: Schwartz, DeMichele

#### Specific Aims

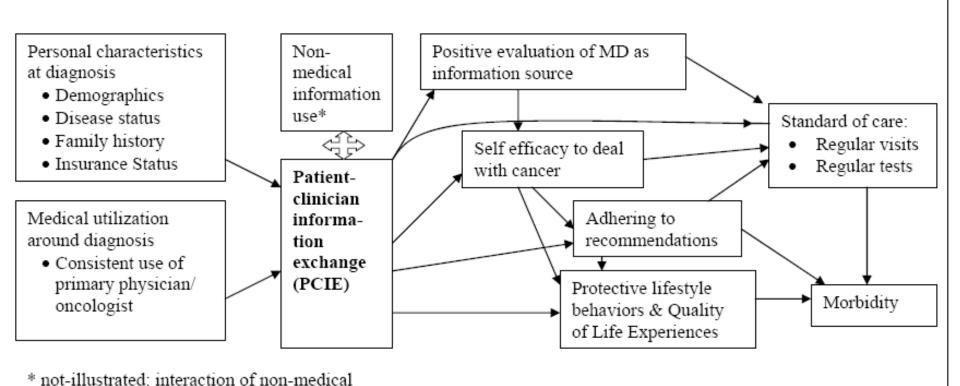
- PCIE improves cognitive, behavioral, treatment outcomes.
- When PCIE is greater, SSB from non-clinical sources has less effect.
- Medical Home, and lower age, education and breast/prostate versus colon increase PCIE.

## What is this study about?

- PCIE is part of patient-clinician communication
  - Exchange of information
  - Managing uncertainty
  - Making decisions
  - Enabling patient self-management
  - Fostering healing relationships
  - Responding to emotions
- 50% of communicative acts are related to exchange.

#### Current research?

- The best current research observes MDpatient interactions and shows short term associations with patient satisfaction and adherence.
- Little evidence for improved health outcomes
- Little evidence on representative samples
- Little evidence for over time effects.



information use with PCIE in effects on all outcomes

## Prelim Data: distributions

Variable	Disease	% Yes
Actively looked for	Breast	79.8
information about treatments	Prostate	83.0
from my treating doctors	Colon	62.3
Actively looked for	Breast	78.2
information about my cancer from my treating doctors	Prostate	83.3
(including non-treatment information)	Colon	64.5
Reports having brought	Breast	69.1
information from other sources to discuss with	Prostate	73.4
treating doctors	Colon	47.1
Reports having actively	Breast	48.5
looked for information about quality of life after cancer	Prostate	55.8
frommy treating doctors.	Colon	43.1

## Prelim: Self Efficacy

Variable	Disease	Active MD seeking score			Relative odds
		0/1	2/3	4	4 vs 0/1
% Strongly agrees: believes him/herself to be informed about	Breast	28.4	44.6	54.4	3.01
treatment, disease management,	Prostate	26.4	44.6	50.2	2.81
treatment benefits, risks and side effects	Colon	20.3	35.4	45.5	3.28
"How the decisions abouttreatments were actually made" (% saying decisions were equally shared or dominated by patient)	Breast	63.3	80.6	84.1	3.07
	Prostate	66.1	86.4	91.5	5.52
	Colon	64.1	77.4	83.3	2.79
"I am confident in my ability to: participate in decisions, get help, ask my doctors, manage unexpected problems, deal with emotional problems.	Breast	26.7	39.0	45.6	2.30
	Prostate	25.0	29.6	42.3	2.20
	Colon	23.7	28.2	43.5	2.48

# Prelim Data: Following Recommendations

Variable	Getting and Following recommendat ions	Active MD seeking score			Relative odds
How often did you followprescriptions or recommendations for:		0/1	2/3	4	4 vs 0/1
Tests to monitor your cancer	% getting	86.0	88.4	95.4	3.38
	% following	61.1	72.2	70.3	1.51
Medications/ Treatments for your cancer	% getting	77.7	76.0	87.8	2.07
	% following'	62.4	65.6	73.1	1.64
Lifestyle changes	% getting	66.8	67.3	77.3	1.69
	% following	28.2	32.6	38.2	1.57

## Lifestyle Behaviors and PCIE

Variable	Active MD seeking score			Relative odds
	0/1	2/3	4	4 vs 0/1
Exercise (% 3 or more days of exercise per week)	53.4	52.6	57.4	1.18
Fruit and Vegetable consumption (% 5 or more servings per day)	25.0	33.3	37.7	1.82
"Controlled diet to lose weight in past 30 days" (% Yes)	28.9	32.9	44.2	1.95

#### Prelim: Prostate Cancer Treatments

Disease	Treatment	Treatment specific Ac	Relative odds	
		0/1	2	2 vs 0/1
	Surgery	16.9	36.4	2.81
Prostate Cancer  Hormone t	External Beam Radiation	52.6	39.4	0.59
	Radiation (seed implants)	19.0	24.3	1.37
	Hormone therapy	30.9	25.5	0.77
	Watchful waiting	13.9	12.2	0.86

#### Data for SSB II

- 2 existing + 1 new round of cancer patient data, covering period from +1 to +3 years post diagnosis. (N=1100 w/ 3 rounds)
- Medicare data for one year before and three years after diagnosis.
  - Medical provider utilization
  - Surveillance behavior (visits, tests)
  - Treatments

(about ½ of sample is 65+ at time of diagnosis)

#### Study 1

- Develop and validate alternative measures of PCIE (11 measures available)
- Prospective cohort study: PCIE reported at round
  1→cognitive, behavioral, treatment outcomes in
  subsequent 2 years assessed by questionnaire
  and from Medicare records, adjusting for baseline
  outcome behavior and confounders.
- Interaction of Non-clinician SSB with PCIE in joint effects on delayed outcomes.

## Study 2: Determinants of PCIE

- What accounts for variation in PCIE documented at round 1?
  - Patient demographic characteristics
  - Patient clinical characteristics (cancer, stage, family history)
  - Pattern of primary care and specialist physician visits
- Are effects of pattern of physician visits on outcomes like assessments of & future reliance on MDs, and self-efficacy mediated through PCIE?

# Smoking Cues in Anti-tobacco PSAs

PIs:

Caryn Lerman
Joseph N. Cappella

#### AIMS

- Effects of smoking cues presented in antitobacco PSAs on smoking urges, message processing, and persuasion.
- Effects of smoking cues in anti-tobacco PSAs on physiological measures of cue-reactivity and on smoking behavior.

#### Background

- Smoking cue reactivity 
   urge
- Anti-smoking ads
  - 40% with smoking cues
- Theory
  - Cue → distraction or attention
  - -AD
    - Approach: smoking cue
    - Avoid: smoking = harm

#### **Preliminary Data**

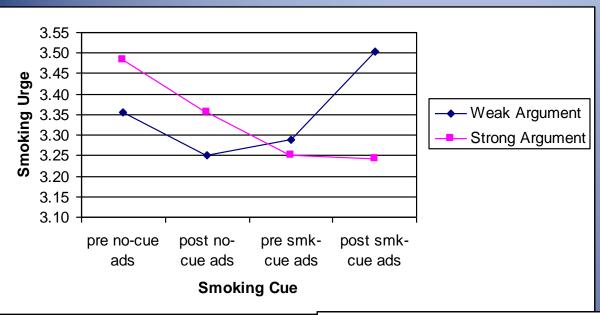
		Smoki (within-	
Argument Strength (between- subject)		No	Yes
	Strong	3 PSAs	3 PSAs
	Weak	3 PSAs	3 PSAs

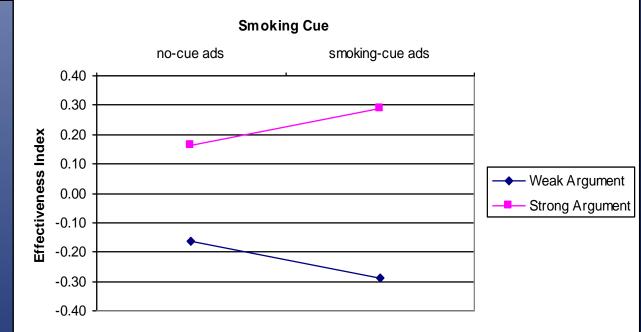


Yahui Kang

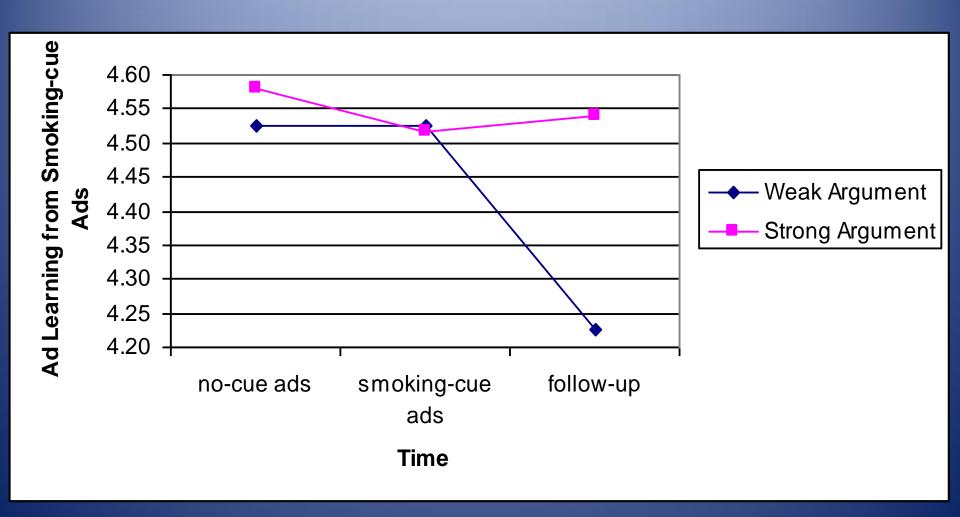
- Participants
  - Screening criteria
  - N=96, 54% male, age =33, 14 yrs edu, 59% Caucasian, first cig =16 yrs old, 17 cig/day, 29 days smoking in the previous 30 days
  - N=82 follow-up,

#### **Smoking Urge**





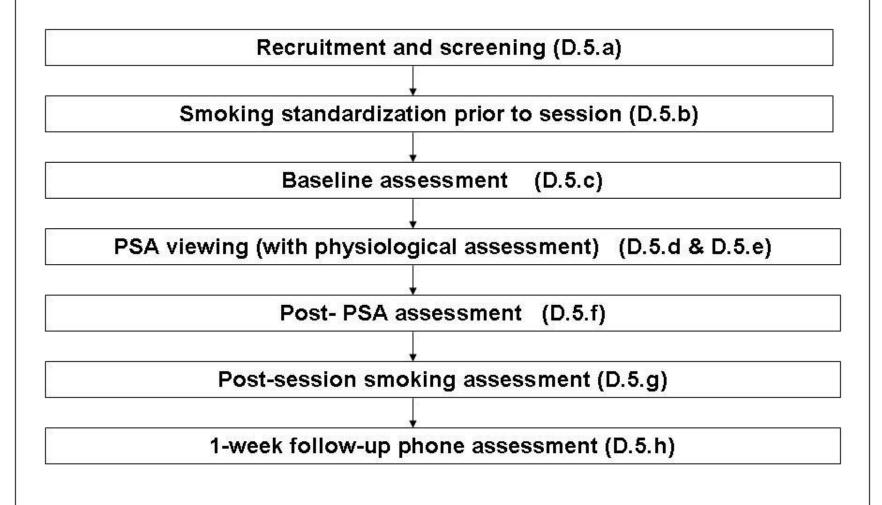
## Learning



## Design

		No Cue	Peripheral Cue	Central Cue
Argument	Weak	4 PSAs	4 PSAs	4 PSAs
Strength	Strong	4 PSAs	4 PSAs	4 PSAs

#### FLOW OF STUDY PROCEDURES



#### Primary Hypotheses

- Cues increase urge
- Urge undermines processing affecting learning, intention.
- Urge greater for weak than strong arguments
- Urge greater when cues peripheral vs. central
- Latency & intensity of smoking altered by
  - Weak > strong arguments
  - Peripheral > central cues

## Potential Significance

- Improve anti-smoking PSA design
- Cues beneficial vs harmful

# Message Core: Design, Evaluation, and Methods

Joseph N. Cappella

Co-Is: Marty Fishbein, Paul Messaris

#### Aims

- To select, design, test, and evaluate messages.
- To do so rapidly and efficiently (ANHCS)
- To collaborate with cancer-related research projects at Penn and around the country in selecting, designing, testing, and evaluating messages for cancer communication research.
- To develop and evaluate new methods and tools for the efficient and valid assessment of theoretically important message characteristics.
- To advance theories of message effects.

#### Background

- Theoretically important message features
- Efficient message evaluation
  - Perceived effectiveness
  - Reactance
- ANHCS

## Significance

- Careful pretesting of messages
- Efficient testing
- Message design

## Penn CECCR Projects

- PSAs for smoking cue project: MSV, argument strength, VVR, controls (Lerman & Cappella)
- fMRI pilot of smoking cues: MSV, argument strength, cues, control (James Loughead)
- Genetic threat pilot : threat, exemplar (Schnoll & Patterson)

## Message Core Collaborations

- Dr. Sherry Emery, UIC, smoking ads.
- Dr. Dan Langleben, U of P, fMRI, smoking ads.
- Dr. Andrew Strasser, UofP, warning labels on tobacco products.
- Dr. Giang Nyugen, HUP, enrolling Asian-American Fs in HPV research.
- Dr. Rene Weber, fMRI of MJ smoking PSAs

## New Directions: Nonverbal Tailoring & Skin Cancer Prevention

- Melanie I (completed)
- Melanie II (stimulus development)
- Sky Study (Stanford: Dr. Jeremy Bailenson, Jesse Fox)



Meet **Melanie**, a junior at Brunswick College. Like many young women, Melanie is involved in a variety of activities within her campus community. Among them, she devotes substantial time to educating fellow students on the importance of practicing sun safety.



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Nine months ago, Melanie was diagnosed with basal cell carcinoma, the most common form of skin cancer. "I was trying on new swimsuits when I noticed this flat, scar-like lesion on my back." Melanie had always spent a lot of time outdoors, running, going to the beach, and enjoying time in the sun. "I remember my mom telling me to look for changes in any moles, so when I saw that lesion, I went to see my dermatologist."

One in five Americans will develop skin cancer some time in their life, and melanoma (the most serious form of skin cancer) is the third most common cancer in women aged 20 to 29.

"I never thought skin cancer was something that I had to worry about, which is why I wanted to increase awareness on campus." Now, sport teams at her college only practice before 10am and after 4pm, when the sun's ultraviolet rays are not as strong. And she and other volunteers pass out samples of sunscreen with a Sun Protection Factor (SPF) of 15 or higher at all outdoor events. Melanie continues to enjoy her time outdoors, just more safely.

#### Join Melanie-Make sun safety a way of life.

Use sunscreen, cover up, and watch for skin changes.

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#### Melanie I

- Sample: N=100, Fs, 18-23
- Design
  - Two conditions: Facial morphing (40%) vs control
- Results:
  - Morphed > Control: anxiety, empathy, elevated risk
  - Intentions (NS)

# Melanie II (morphed)

Shortcut to !!\_New\_MelanieBrochure.ppsx.lnk

#### Sky Study (Jeremy Bailenson, Jesse Fox, Stanford)

• 2X2: threat (mole size) X own vs other face



## Potential Significance

- Careful pretesting of messages
- Efficient testing
- Message design (Messaris)